



Mobile Climate Control

# MCC Climate Chamber

## Climate Chamber Testing

MCC's climate chamber in Vaughan, Ontario, Canada provides controlled environmental testing for complete vehicles, HVAC systems, and components.

Test HVAC performance across extreme conditions from  $-40^{\circ}\text{C}$  /  $-40^{\circ}\text{F}$  to  $+60^{\circ}\text{C}$  /  $+140^{\circ}\text{F}$ , with controlled humidity and sun load simulation to support reliable validation before field deployment.



## KEY BENEFITS & CAPABILITIES



**Full Vehicle & Component Testing:** Validate vehicles, HVAC systems, and thermal management components in controlled conditions.



**Extreme Climate Conditions:** Test performance from  $-40^{\circ}\text{C}$  /  $-40^{\circ}\text{F}$  to  $+60^{\circ}\text{C}$  /  $+140^{\circ}\text{F}$  with humidity up to 95% RH.



**Sun Load Simulation:** Replicate high solar radiation conditions up to approximately  $1250 \text{ W/m}^2$ .



**Engineering Support:** Work with MCC engineers to plan and execute testing based on your requirements.

## OUR TESTING PORTFOLIO

- Thermal Performance:** Validate cold start, heat-up, cool-down, heating, and cooling performance.
- Safety & Visibility:** Evaluate defrost and defog performance to support visibility and safety requirements in demanding climate conditions.
- Safety, Airflow & Comfort:** Evaluate defrost, defog, cabin airflow, and thermal comfort.
- Efficiency & Electrical Performance:** Measure power consumption, cabin  $\text{CO}_2$ , noise, and overall system performance.

## TESTING OPTIONS & SUPPORT

| Testing Scope        | Typical Applications                            | Support Available                                       |
|----------------------|-------------------------------------------------|---------------------------------------------------------|
| Full Vehicle Testing | Buses, coaches, commercial & specialty vehicles | Climate testing, HVAC performance, airflow, energy use  |
| HVAC System Testing  | Heating, cooling & climate control systems      | Thermal performance, power consumption, defrost & defog |
| Component Testing    | Thermal management & HVAC components            | Controlled environmental validation & comparison        |
| Engineering Support  | Test planning, troubleshooting & validation     | MCC engineering expertise available                     |

## SPECIFICATIONS

- Temperature Range:**  
 $-40^{\circ}\text{C}$  /  $-40^{\circ}\text{F}$  to  $+60^{\circ}\text{C}$  /  $+140^{\circ}\text{F}$
- Humidity:**  
Controlled humidity up to 95% RH.
- Sun Load Simulation:**  
Solar radiation simulation of approximately  $1250 \text{ W/m}^2$ .
- Voltage Support:**  
 $0-1000 \text{ VDC}$  / 105 Amps and  $0-600 \text{ VAC}$  / 60 Amps.
- Vehicle Capacity:**  
Accommodates vehicles and equipment up to 20 tonnes.
- Maximum Vehicle Dimensions:**  
Up to  $21 \text{ m (L)} \times 3.6 \text{ m (W)} \times 4.4 \text{ m (H)}$ .

Testing is tailored to your vehicle, component, and test requirements. Contact MCC for a project-specific quotation.

Contact us to learn more at [www.mcc-hvac.com/contact](http://www.mcc-hvac.com/contact).



Vaughan, Ontario, Canada



MEMBER OF VBG GROUP